

Name \_\_\_\_\_ Date \_\_\_\_\_ Hr \_\_\_\_\_

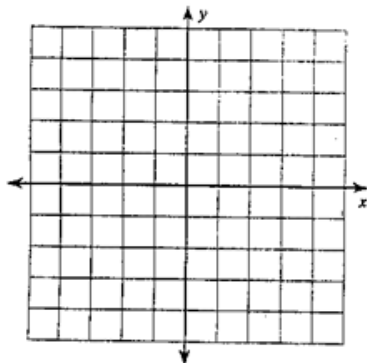
# Rotations!!!

## Geometry

Graph the preimage and image of the figure using the rotation given. Write the new coordinates of the image.

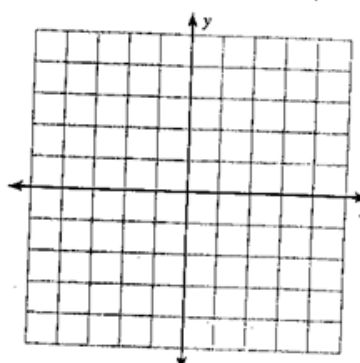
1. rotation  $270^\circ$  counterclockwise about the origin

$H(1, -2), R(3, 2), I(3, -3)$

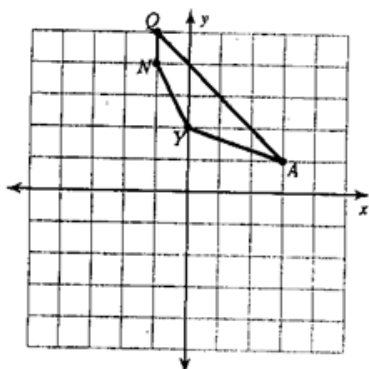


2. rotation  $90^\circ$  counterclockwise about the origin

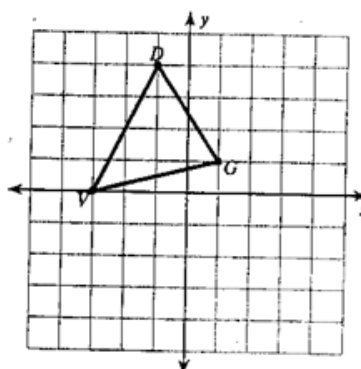
$Z(-2, -2), A(1, 0), F(3, -4)$



3. rotation  $90^\circ$  counterclockwise about the origin

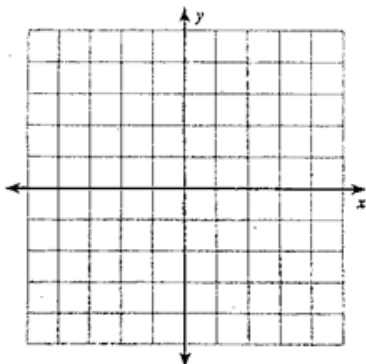


4. rotation  $90^\circ$  counterclockwise about the origin



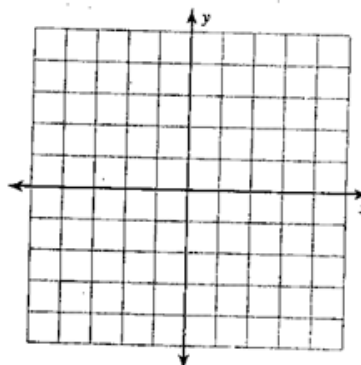
5. rotation  $180^\circ$  about the origin

$U(3, 2), P(3, 5), V(4, 2)$

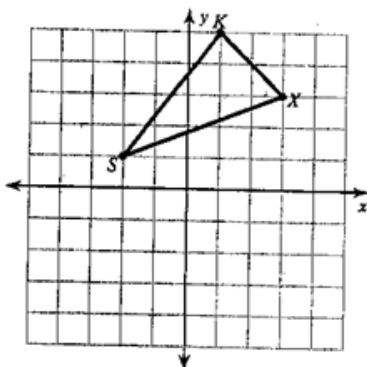


6. rotation  $180^\circ$  about the origin

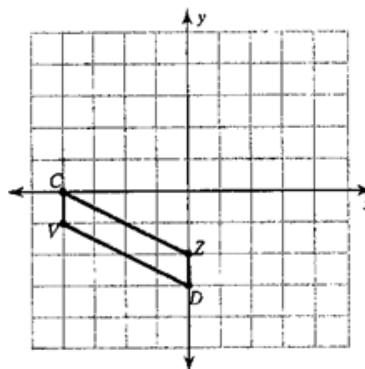
$M(-1, -4), E(1, -1), I(4, -5)$



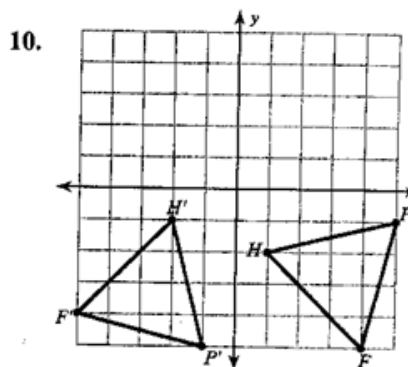
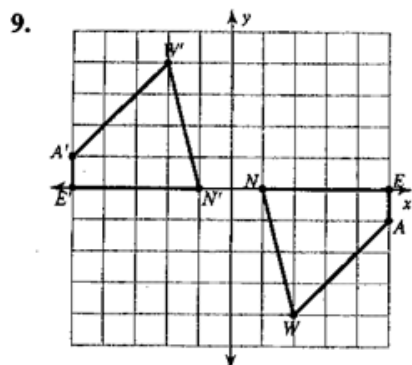
7. rotation  $180^\circ$  about the origin



8. rotation  $90^\circ$  counterclockwise about the origin



Give the number of degrees that maps the original figure onto its image. Write the rule that correlates with the number of degrees. (example: if you say  $90^\circ$ , then write  $(x, y) \rightarrow (-y, x)$ )



11.  $U(3, 2), N(4, 5), L(5, 4)$   
to  
 $U'(2, -3), N'(5, -4), L'(4, -5)$

12.  $G(-4, -3), V(-3, 2), C(-2, -1)$   
to  
 $G'(4, 3), V'(3, -2), C'(2, 1)$

13.  $G(2, -5), U(3, -3), W(5, -4)$   
to  
 $G'(5, 2), U'(3, 3), W'(4, 5)$

14.  $H(0, 0), C(2, 4), J(5, 1), L(1, -1)$   
to  
 $H'(0, 0), C'(-2, -4), J'(-5, -1), L'(-1, 1)$